

Claims

I claim:

1. A method for validating remotely cached dynamic content web pages, comprising:
 - determining a cacheability of a response to a client request, sources of dynamic content in the response and a set of dependencies on the sources;
 - generating an entity tag based on the cacheability, the sources and the set of dependencies;
 - returning and caching the response and the entity tag on the client;
 - receiving a subsequent request from the client with the entity tag; and
 - analyzing the entity tag to determine if the cached response is valid.
2. The method of claim 1, further comprising:
 - sending a status code to the client if the cached response is valid; and
 - displaying the cached response.

3. The method of claim 1, further comprising

generating a new response if the cached response is not valid;

determining a cacheability of the new response, sources of dynamic content in the new response and a set of dependencies on the sources of the dynamic content in the new response;

generating a new entity tag based on the cacheability of the new response, the sources of dynamic content in the new response and the set of dependencies on the sources of the dynamic content in the new response; and

returning and caching the new response and the new entity tag on the client.

4. The method of claim 1, wherein the analyzing step comprises:

decoding the entity tag;

identifying the sources; and

comparing time values within the entity tag associated with the set of dependencies to corresponding time values for the sources to determine if the cached response is valid, wherein the cached response is valid if the time values within the entity tag match the corresponding time values for the sources.

5. The method of claim 1, wherein the set of dependencies comprises at least one of a database design, database data, and document data.

6. The method of claim 1, wherein the returning and caching step comprises:

encoding the entity tag; and

returning the entity age to the client in a header accompanying the response.

7. The method of claim 1, wherein the determining step comprises creating a set of cacheability flags based on the set of dependencies, and wherein the entity tag includes the cacheability flags.

8. The method of claim 7, wherein the entity tag further includes a version number, a database design time value and a data time value.

9. The method of claim 8, wherein the entity tag further comprises at least one of a document identifier and a user name.

10. A method for validating remotely cached dynamic content web pages, comprising:

determining a cacheability of a response to a client request for a dynamic content web page, sources of dynamic content in the response and a set of dependencies on the sources;

generating an entity tag, wherein the entity tag identifies the sources and includes cacheability flags and time values associated with the set of dependencies;

returning and caching the response and the entity tag on the client;

receiving a subsequent request for the dynamic content web page from the client with the entity tag; and

comparing the time values in the entity tag with corresponding time values for the sources to determine if the cached response is valid.

11. The method of claim 10, further comprising:

sending a status code to the client if the cached response is valid; and

displaying the cached response.

12. The method of claim 10, further comprising

generating a new response if the cached response is not valid;

determining a cacheability of the new response, sources of dynamic content in the new response and a set of dependencies on the sources of the dynamic content in the new response;

generating a new entity tag, wherein the new entity tag identifies the sources of the dynamic content in the new response, and includes cacheability flags and time values associated with the set of dependencies on the sources of the dynamic content in the new response; and

returning and caching the new response and the new entity tag on the client.

13. The method of claim 10, wherein the analyzing step comprises:

identifying the sources based on the entity tag received with the subsequent request; and

comparing the time values within the entity tag to corresponding time values for the sources to determine if the cached response is valid, wherein the cached response is valid if the time values within the entity tag match the corresponding time values for the sources.

14. The method of claim 10, wherein the time values comprise a database design time value and a data time value.

15. The method of claim 10, wherein the set of dependencies comprises at least one of a database design, database data, and document data.

16. The method of claim 10, wherein the entity tag further comprises at least one of a version number, a document identifier and a user name.

17. The method of claim 10, wherein the returning and caching step comprises:

encoding the entity tag; and

returning the entity tag to the client in a header accompanying the response.

18. A system for validating remotely cached dynamic content web pages, comprising:

a tag generator for generating an entity tag for a response to a client request for a dynamic content web page, wherein the entity tag identifies sources of dynamic content in the response and includes cacheability flags corresponding to a cacheability of the response and time values associated with a set of dependencies on the sources, and wherein the response and the entity tag are cached on the client; and

a tag analyzer for analyzing the entity tag when received from the client with a subsequent request for the dynamic content web page to determine if the cached response is valid.

19. The system of claim 18, wherein the cached response is valid if the time values within the entity tag match corresponding time values for the sources.

20. The system of claim 18, wherein a “Not Modified” status code is sent to the client if the cached response is valid.

21. The system of claim 18, wherein a new response is generated and sent to the client with a new entity tag if the cached response is not valid.

22. The system of claim 18, further comprising:

a cacheability analyzer for determining the cacheability of the response, and for generating the cacheability flags; and

a response builder for generating the response.

23. The system of claim 18, wherein the set of dependencies comprise at least one of a database design, database data and document data.

24. The system of claim 18, wherein the time values comprise a database design time value and a data time value.

25. The system of claim 18, wherein the entity tag further comprises at least one of a version number, a document identifier and a user name.

26. A program product stored on a recordable medium for validating remotely cached dynamic content web pages, which when executed, comprises:

program code for generating an entity tag for a response to a client request for a dynamic content web page, wherein the entity tag identifies sources of dynamic content in the response and includes cacheability flags corresponding to a cacheability of the response and time values associated with a set of dependencies on the sources, and wherein the response and the entity tag are cached on the client; and

program code for analyzing the entity tag when received from the client with a subsequent request for the dynamic content web page to determine if the cached response is valid.

27. The program product of claim 26, wherein the cached response is valid if the time values within the entity tag match corresponding time values for the sources.

28. The program product of claim 26, wherein a status code is sent to the client if the cached response is valid.

29. The program product of claim 26, wherein a new response is generated and sent to the client with a new entity tag if the cached response is not valid.

30. The program product of claim 26, further comprising:

program code for determining the cacheability of the response, and for generating the cacheability flags; and

program code for generating the response.

31. The program product of claim 26, wherein the set of dependencies comprise at least one of a database design, database data and document data.

32. The program product of claim 26, wherein the time values comprise a database design time value and a data time value.

33. The program product of claim 26, wherein the entity tag further comprises at least one of a version number, a document identifier and a user name.